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The Disclosure Document Program brochure specifies that a disclosure document will be "...destroyed unless it is referred to in a separate letter in a related patent application filed within the two-year period."

In April of 2003, I filed, with the Disclosure Document Program, a document describing my invention.

In July of 2004, I used the EFS to file my patent application.

EFS does not provide a way to include a "separate letter". Therefore, I am mailing the "separate letter" separately. And **this is that "separate letter"**. Please acknowledge this as specified in the brochure: "Acknowledgment of such letters will be made in the next official communication or in a separate letter from the USPTO."

I refer to the Disclosure Document:
titled -- "Playground in a Box";
numbered: -- 530519
received by uspto -- April 28 2003.

The related patent application is:
titled -- "Safe Compactible Play Structure"
of type -- Utility
Application Number -- 10/710735
EFS ID -- 65590
transmitted -- July 30, 2004.

Thank you for your attention to this.


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(Rev. 7-75)

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SERIAL NO.	FILING DATE
10/710735	07-30-04

ABANDONED FILES: The above application
is referred to in application.

Serial No. _____ Filed _____

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Disclosure Document Deposit Request

530519
DISCLOSURE DOCUMENT

Mail to:

Box DD
Assistant Commissioner for Patents
Washington, DC 20231Inventor(s): Nathan FeinsteinTitle of Invention: Playground in a Box

Enclosed is a disclosure of the above-titled invention consisting of 6 sheets of description and 2 sheets of drawings. A check or money order in the amount of \$10.00 is enclosed to cover the fee (37 CFR 1.21(c)).

The undersigned, being a named inventor of the disclosed invention, requests that the enclosed papers be accepted under the Disclosure Document Program, and that they be preserved for a period of two years.

Nathan Feinstein

Signature of Inventor

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Apr. 23 '03

Date

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Disclosure Document for "Playground in a Box"

This describes a climbing and sliding play structure for children. The structure includes features to prevent injury due to falls. The structure can collapse into a box for easy storage or transport. The box is also a play table.

Children can use the structure from around age 18 months, to around their fourth birthday. One adult can reconfigure the item between play structure and play table in about 5 minutes.

The play table

As a play table, the invention is simply a box with 6 rectangular sides, one being a play table top. The top and/or side surfaces can be made of chalkboard material, or Velcro material, or in other ways be constructed to enhance play opportunities.

The climbing/sliding play structure [see figure 1]

As a play structure, the invention includes a play platform, a fabric ramp extending from the front of the play platform out and down at an angle (of perhaps 45 degrees) to near floor level. The ramp has footholds on one side, and a smooth sliding surface on the other side. The play platform is enclosed on 3 sides and the top. The side of the play platform which is above the top of the ramp is open.

A 90 degree arc of netting extends from the top of the open side of the platform enclosure, for the width of the play platform. The arc extends out over the ramp, curving downward, ending at near the height of the play platform. The arc extends forward about as far as the ramp bottom extends forward.

A fabric fall barrier extends from the left edge of the ramp, vertically upward to where it meets the netting. And there is an identical fall barrier extending from the right edge of the ramp. The fall barrier vertical edges adjacent to the platform enclosure are contiguous with the enclosure.

The platform enclosure opening is partly covered by a screen extending from the top of the ramp to the top of the open side of the platform enclosure, centered on the center of the ramp. The screen can be about half the width of the ramp.

At floor level, at the bottom of the ramp, extending further outward is a play/safety mat.

Typical play

In the most typical play mode, children climb the ramp, play on the platform, hide behind the screen and slide down the ramp. The only direction open to falling is down the ramp and onto the play/safety mat. The netting arc prevents children from running off the ramp at high speed and crashing into rigid objects in front of the mat.

major components

The two largest components of the invention are each box shaped, forming, in the play table configuration, an outer box and an inner box.

Outer box

The outer box has 5 rigid rectangular faces, and an opening where the 6th face would be. One side of the outer box forms the table top of the play table, and the opening is vertical when the table top is horizontal.

Inner box

The inner box has 5 rectangular faces and an opening where the 6th face would be.

The inner box slides into the outer box in a manner similar to a drawer into a desk. The open side of the inner box is like the open top of the drawer, and the open side of the outer box is like the opening of the desk into which the drawer slides. The open side of the inner box is oriented opposite the play table top, so the arrangement is more exactly like a drawer slid upside-down into a desk. One side of the inner box extends slightly beyond the dimensions of the inner box, being something like the front face of a drawer, preventing the drawer from continuing to slide beyond the closed position. The dimensions of this extended side are exactly the dimensions of the open side of the outer box, so forming a fully closed outer box when the "drawer" is closed.

The inner box side with extended dimensions ("drawer front face") forms the play structure play platform. The inner box open side forms the play platform enclosure opening. The other 4 sides of the box form the play platform enclosure.

Two 'L' shaped components are hinged to the top of the open side of the enclosure. The hinges attach near the free end of the short leg of each 'L'. The long leg of each 'L' is bent to an arc shape, the bend direction being perpendicular to the short leg of the 'L'. The bend radius is about equal to the radius of the netting arc. The arc extends for only part of the 90 degrees that the netting arc extends (perhaps 45 degrees). The two 'L' components bend in directions opposite one another, one for the left side, one for the right. The

hinges attach so that the short legs of the 'L'-s are parallel to the top edge of the open side of the platform enclosure. When the long legs of the 'L'-s are roughly vertical, extending downward from the short leg of the 'L', they arc inward. The hinges allow the the long arced legs to swivel, from hanging down from the hinge, to extending outward. And the hinges slide on the platform enclosure edge, so the 'L'-s can be moved outward and inward. When slid outward, the distance between the long legs of the two 'L'-s is about the width of the outer box. When slid inward, the 'L'-s are entirely within the planes of the platform enclosure sides.

Other major components

The remaining components are: two ramp braces, each in the shape of a right isosceles triangle; a ramp bottom support board; two straight poles; two bent poles; a fabric ramp; two fabric fall guards; two fabric under-ramp barriers; a fabric screen; no-climb netting; and a foldable play/safety mat.

The bent poles are bent in an arc with the same radii as the 'L' arcs. A bent pole arc combined with an 'L' arc form a 90 degree arc.

The ramp, fall barriers, under-ramp barriers, netting and play mat are all attached together. And the fall barriers are attached to the enclosure.

How parts stowed when configured as table

The two 'L' components of the inner box, are slid just inward of the sides of the enclosure opening, and swiveled downward so that they are entirely within the inner box.

The two ramp braces are stowed in a recess in the outer box face opposite the table top. If the the two ramp brace triangles are arranged with their long edges adjacent, forming a rectangle, they can stow within a rectangular recess without overlap.

The ramp bottom support is stowed just under the table top, diagonally.

The two straight poles and two additional bent poles are stowed in the inner box. The mat is folded and stowed into the inner box. The ramp, fall guards, under ramp barriers and netting are gathered on the long legs of the inner box 'L'-s (gathered at the seam connecting the netting and fall guards). The point of each gather, where ramp bottom joins the fall barrier bottom corner, is attached to the free end of its 'L' long leg. The inner box is slid into the outer box.

Steps to reconfigure table into play structure [see figure 2]

- 1) Slide inner box out of outer box. [2a, 2b, 2c]
- 2) Orient outer box, so its opening is on top and horizontal, and table top is vertical and in back. Recess where ramp braces are stowed is now in front. [2d]
- 3) Orient inner box so the part that closed the outer box (drawer front), is flat on the floor, and the open side of the enclosure is forward. In this orientation, the bottom of the inner box is the play platform.
- 4) Lift inner box up and place it on top of the outer box. Secure inner box on outer box. [2e]
- 5) Remove ramp braces from where stowed, attach to front of outer box so the long sides of the braces angle down and forward from near the top front edge of the play platform to floor level. [2f]
- 6) Attach, in a vertical orientation, a straight pole into each ramp brace, at the floor level front corner of the brace. Straight poles extend upward from floor level. [2g]
- 7) Pivot 'L'-s on their hinges, upward, so the arcs approach horizontal as they reach the point attached to the short 'L' legs. Slide 'L'-s outward, and secure. [2f]
- 8) Attach a bent pole between the free end of each 'L' arced leg, and the top of its nearest vertical straight pole. Orient the pole bends to continue the arc of the 'L' legs. [2g]
- 9) Detach ends of gather from free ends of 'L'-s.
- 10) Slide netting and fall guards down bent poles, and down straight poles, to meet the ramp braces, and fully extending the gathered fabric. This also extends the ramp from the front of the platform down to the bottom front of the ramp braces.
- 11) Insert the ramp bottom support board into the bottom of the ramp, and secure to the forward bottom corners of the ramp braces.
- 12) Unfold play mat and lay flat on floor in front of ramp.
- 13) Secure under-ramp barriers to bottom front of outer box.
- 14) Children can play!

A way to construct footholds on ramp

The footholds can be constructed as roughly horizontal ridges sown onto the climbing portion of the ramp. Each ridge can be composed of a rope core covered with fabric, the fabric being sewn down to the ramp. To make the ridges less floppy, two ropes can be used in the core, an upper rope and a lower rope. The ropes are parallel, the lower (possibly of less diameter) rope supporting the upper rope on which children step.

One manner of construction is:

- 1) Sew two strips of fabric ('A' and 'B') together, one broad edge of 'B' onto a broad line 'L' about 1/3 way in from a broad edge of 'A'.
- 2) Sew the broad edge of 'A', which is farthest from 'L', horizontally onto the ramp.
- 3) Sew the remaining broad edge of 'A' onto the ramp below the edge already sown. Locate this seam so as to form the minimum size tunnel in which the fatter of two ropes can be inserted.
- 4) Sew the free broad edge of 'B' onto the ramp, below both broad edges of 'A', and located so as to form the minimum size tunnel in which the thinner of two ropes can be inserted.
- 5) Insert the ropes
- 6) sew the ends of the tunnels down to the ramp.

A way to construct folding safety mat

The safety mat must be long enough and broad enough to fully cover the floor area where children using the play structure might impact. And the mat must fold small enough to fit inside the inner box, along with other components that stow there.

The mat can consist of 6 segments 'A' through 'F'. Segments 'A', 'B' and 'C' across the front of the base of the ramp. Segments 'D', 'E' and 'F' extending the respective 'A', 'B' and 'C' segments outward from the ramp. The total width of each group of three is greater than the ramp width, as children can fall at an angle.

'B', and the sides of 'A' and 'C' adjacent 'B', are a little longer than the outer parts of 'A' and 'C'. This extra length is placed on the lower portion of the ramp, on top of the ramp bottom support lumber. This extra length is beveled to provide a smooth transition for sliders from the ramp to the mat. A fabric flap extends from the ramp just above the top of the mat extension, over the mat extension, so sliders are conveyed over the mat extension.

Some adjoining mat segments are sewn together at the top of their adjoining sides so they can be folded with the tops being to the inside of the fold. Other adjoining segments are sewn together at the bottom of the adjoining sides so they can be folded with the bottoms on the inside of the fold.

'B' is not connected to 'D' (though the adjoin when mat is unfolded), except indirectly through other segments they both adjoin. 'B' and 'D' can separate, forming the outsides of a sandwich holding the other 4 segments.

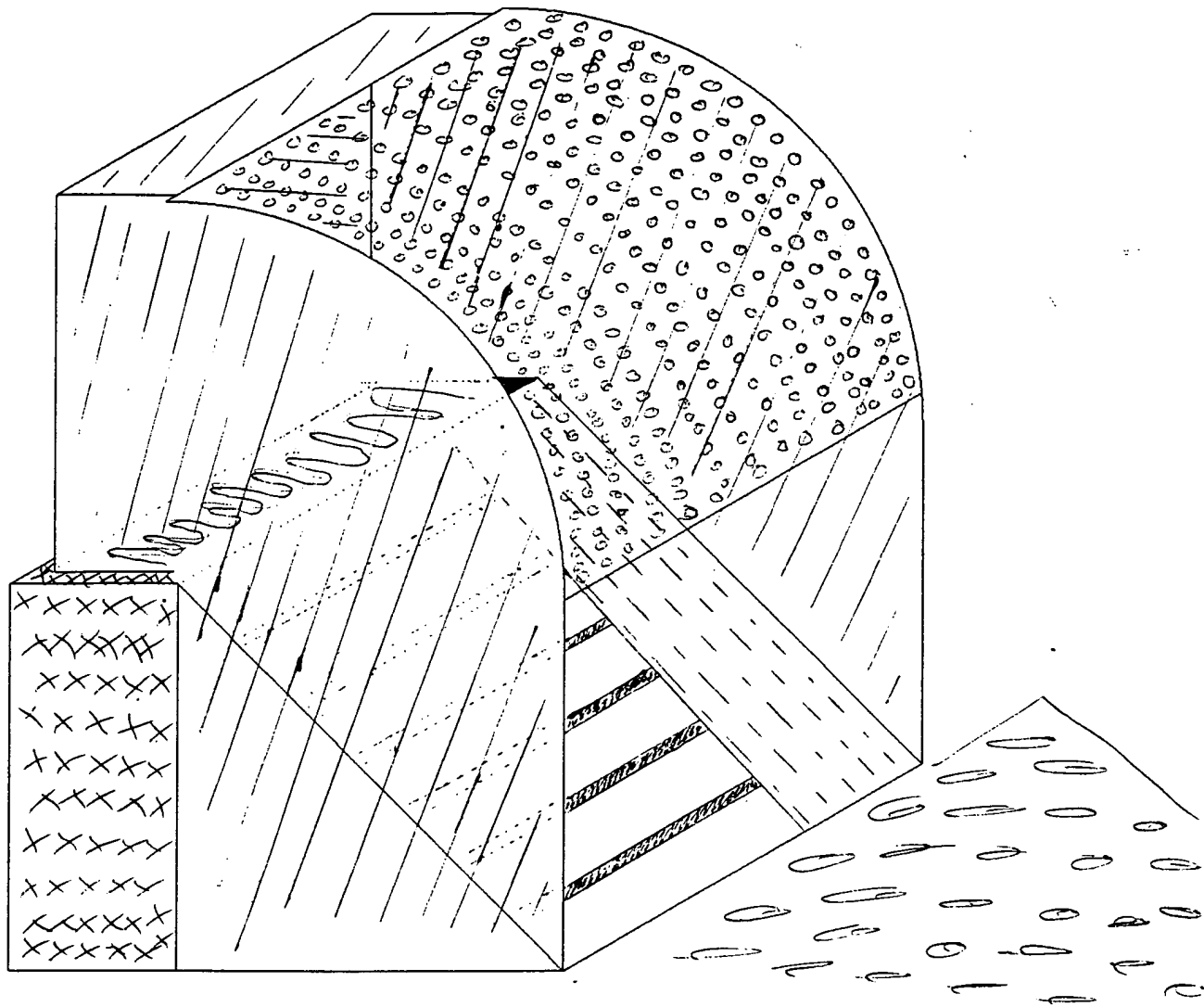
Sewn at the top are 'A' to 'B', 'B' to 'C', 'D' to 'E' and 'E' to 'F'.

Sewn at the bottom are 'A' to 'D' and 'C' to 'F'.

'A', 'C', 'D' and 'F' are no more than half the width of 'B' and 'E', so that they can all be folded on to 'B' or 'E' without overlap.

To fold up the mat:

- 1) Fold 'A' and 'D' over 'B' and 'E' respectively.
- 2) Fold 'C' and 'F' over 'B' and 'E' respectively.
- 3) Fold the 'D'- 'E'- 'F' complex over the 'A'- 'B'- 'C' complex, forming a sandwich with 'B' and 'E' as the bread.



side fall barrier
under ramp barrier
platform enclosure



hidden part of
play platform



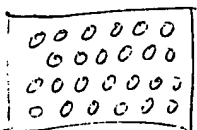
play platform



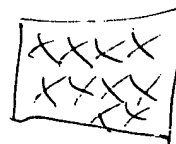
ramp climbing
portion, foothold



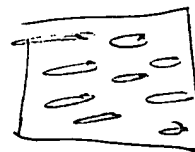
sliding portion
of ramp



netting



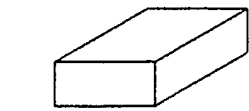
outer box



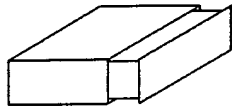
play/safety
mat

not shown: screen, back
of platform enclosure

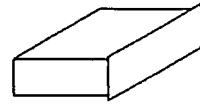
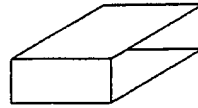
Figure 1



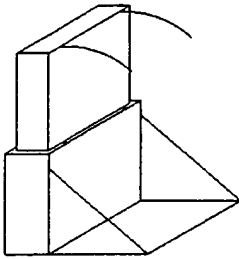
a.



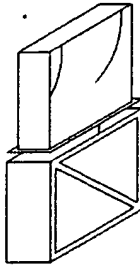
b.



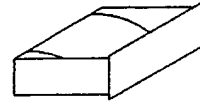
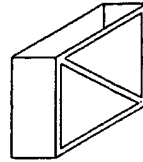
c.



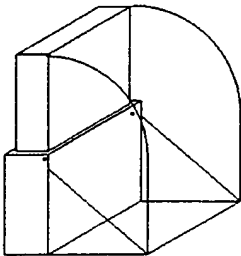
f.



e.



d.



g.

all fabric portions, and mat, not shown
hinges and short 'L' legs, not shown

figure 2